



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 9  
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San Francisco, CA 94105-3901

May 4, 2007

Corey Bertelsen  
Casmalia Steering Committee Project Coordinator  
CB Consulting, Incorporated  
868 Greystone Place  
San Luis Obispo, CA 93401

RE: Casmalia Geophysics – (1) Results on Three Dimensional (3D) Rendering of Phase II P/S Landfill Seismic Refraction Survey and (2) Request to Install Four Piezometers

Dear Corey:

We have recently received the results of the geophysics work that the Idaho National Laboratory (INL) has been conducting for the P/S landfill. As you recall, EPA asked INL to undertake an independent processing of the geophysics data that the CSC collected as part of the December 2005 seismic refraction survey. Instead of continuing to review and issue comments on the CSC's interpretation of the data, EPA and the CSC consulted, and EPA determined that it would be more efficient to undertake an independent evaluation of the seismic refraction data.

We are attaching a letter report in which the INL presents their evaluation of the geophysical data collected by the CSC in the southern portion of the P/S Landfill. It also presents their recommendations for follow-up work, i.e., installation of piezometers. As you will note, the INL has concluded that the seismic refraction data present clear indications of several "low areas" within the study area. EPA will seek to gain further understanding regarding the roles of the low spots with respect to potential DNAPL accumulation. As we have discussed with the CSC, it will be necessary to install piezometers in potential "low areas" identified by the geophysical survey work in order to assess the presence of DNAPL as provided in the RI/FS Work Plan (June 2004). Based on the geophysical work -- and consistent with our discussions with the CSC and the RI/FS Work Plan -- EPA requests the CSC to perform the following work:

- Please install three (3) piezometers at the specific locations along the bench roads as recommended in the INL report. Please maintain consistency with the protocols presented in the RI/FS Work Plan. An attached map (Figure 20 from the INL report) presents the preliminary locations for the piezometers. The

locations include (1) a piezometer along Gallery Well Road, west of the Gallery Well, (2) a piezometer along Bench 1 Road, near former PZ-LA-01, and (3) a piezometer along Bench 2 Road. Please note that ideally we would have selected target piezometers sites over the center of the deepest point of each potential low area. However, these include some off-road sites and we are limiting our selection of piezometer installation sites to the bench roads due to access constraints.

- Please evaluate whether the series of CPT pushes recommended in the INL report along each of the three roads (Gallery Well, Bench 1, and Bench 2) are appropriate to assess the optimum locations of the three (3) recommended piezometers. These series of CPT pushes would “ground-truth” the geophysical data. They would also remove some of the uncertainty that results from limiting the piezometer locations to access roads.
- Please install an additional (forth) piezometer near the Gallery Well. The purpose of this piezometer is to monitor actual DNAPL thickness close to the Gallery Well. This is necessary because the DNAPL level in the Gallery Well is kept pumped-down with a submersible pump with intake approximately 2-foot from bottom of the well. Thus, the Gallery Well does not provide a true indication of DNAPL thickness.
- Please provide a technical memorandum presenting the following information: (1) a summary of the proposed work and an evaluation of whether the CSC will perform the series of CPT pushes along the bench roads, (2) a map showing the planned piezometer locations, and (3) detailed references to the RI/FS Work Plan for the work procedures. The referenced procedures should include the following work: accurately locating the piezometers prior to performing work, basis of piezometer design [depth, screened interval], specifications for the proposed CPT rig, initial CPT push with instrumented piezo cone to collected piezometer design data, subsequent CPT direct push to install piezometer, piezometer installation and development. For each of these and any other applicable procedures, please make detailed references to applicable portions of the main work plan (Sections 4 and 5), the sampling and analysis plan (Appendix A), and SOPs (attachments to Appendix A). Please use the 5.4 Kft/sec iso-surface from INL’s Figure 20 as a base map for the CSC’s location map to facilitate EPA’s review.

Please provide this tech memo to EPA for review by May 25, 2007. In addition, please arrange for your contractors to mobilize a CPT rig and provide a schedule for the CPT work and piezometer installation. EPA will expect the CSC to follow appropriate procedures for the piezometer installation. EPA will not accept unauthorized deviations from the approved work plan and will require the CSC to redo any unapproved or off-spec work. EPA requests that the CSC commence the CPT and piezometer installation



work in early June, subject to our approval. If you need additional time, please let us know.

Please note that EPA views the successful installation of these piezometers and interpretation of the data obtained from the piezometers as integral to the Draft RI Report. Please do not hesitate to contact me at (415) 972-3192 if you have any questions.

Sincerely yours,



F. Russell Mechem II  
Project Manager

Attachment: INL Letter Report, *Results on Three Dimensional Rendering of Phase II P/S Landfill Seismic Refraction Survey, Casmalia Superfund Site*

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